



Enabling poor rural people
to overcome poverty



**THE G8 CALL FOR A
COMPOSITE INDICATOR ON AGRICULTURE
FOR FOOD SECURITY**

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**THE COPENHAGEN PROCESS FOR
AN “AGRICULTURAL TRANSFORMATION INDEX “ –
AN INITIATIVE OF THE USG AND THE GOVERNMENT OF DENMARK**

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**In consultation with:
representatives of the USG and Government of Denmark**

Why a composite indicator on agriculture?

Which questions do we need answered?

1. Are food crises here to stay?

- a. A pattern?
 - 2008: misalignment of demand and supply, inflation, trade disruptions
 - 2010: climate shocks
 - 2012: information asymmetry, speculation
- b. The looming food crisis, the lurking food crisis:
 - Underlying structural factors
- c. Triggering a supply response: enhancing investment in agriculture
 - Incomplete price transmission, stickiness
 - Remnants of anti—agricultural (small producer) biases, policy neglect
 - Market transparency and price volatility: AMIS (G20 countries, 4 commodities)

2. Who will produce 60% more food by 2050?

- a. Which farmers?
 - 500 million smallholders producing 80% of the food of the world's poor
 - commercial farmers
 - corporate farming
- b. Smallholder strategies
 - Moving in, hanging in, moving up, moving out
 - Agricultural push, industrial pull
 - Contextual

3. Structural change will happen:

- a. Monitor
- b. Policy
- c. Strategy

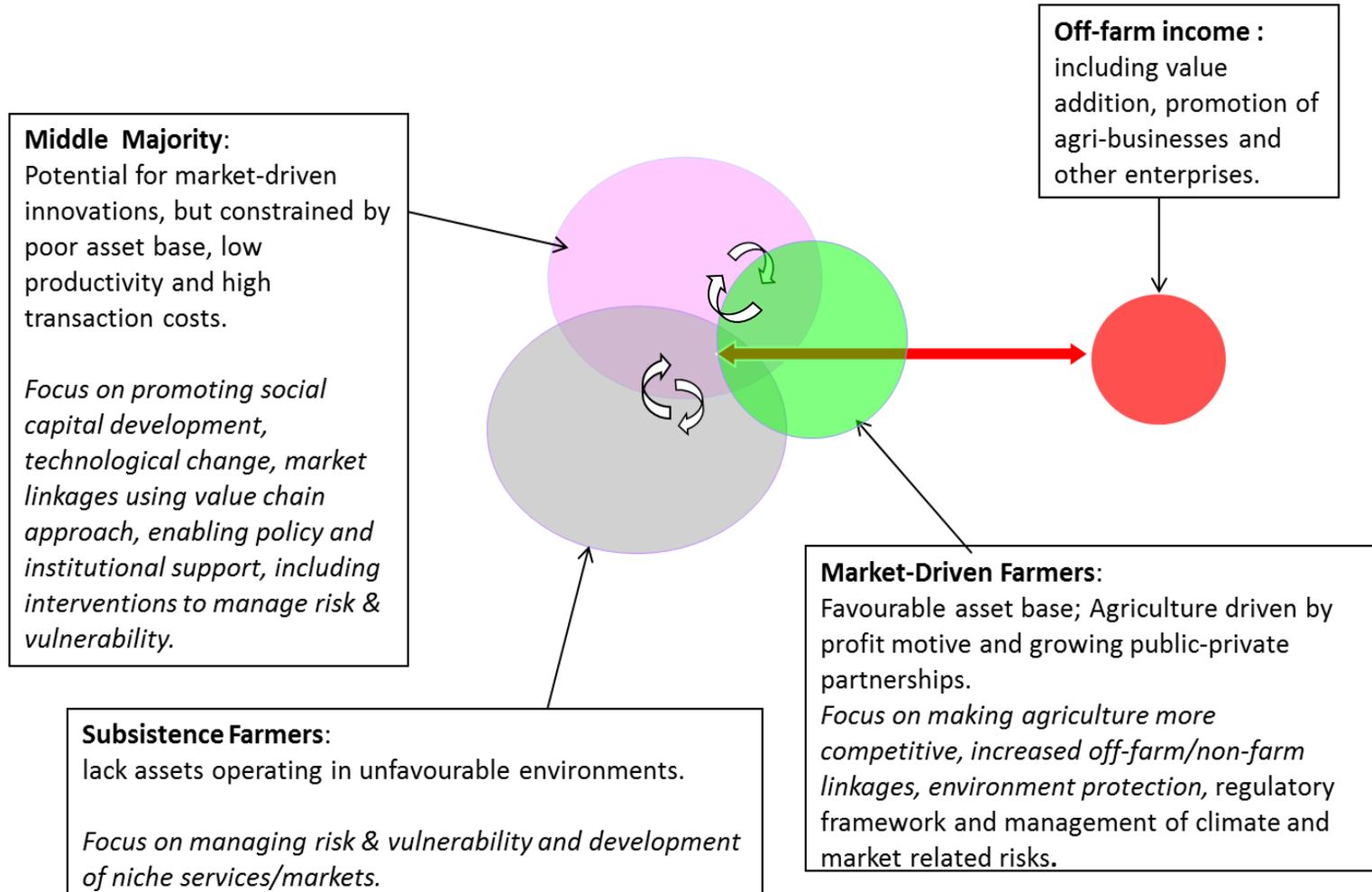


Key messages: SOFI 2012

1. Data matter, assumptions and methods matter, purpose matters
2. Inclusive growth and agricultural growth are crucial for poverty reduction and food security
3. Labour productivity enhancing investments are instrumental
4. Smallholders are in the middle



Theory of farming systems change



Sustainable agricultural intensification:

- profitable business opportunities for young, female and male, smallholder farmers; and now
- a macro-economic proposition



A composite indicator for agriculture in the making: an “Agricultural Transformation Index”

❖ Champions

- a. G8 – initiative
- b. USAID /Government of Denmark lead Copenhagen Initiative
 - Copenhagen Consultation, 28-29 June , 2012: many views - 4 proposed models for “ATI”
 - Process
- c. Inclusive multi-stakeholder process

1. Index of what?

- a. Structure of agricultural sector: global, role of smallholders
- b. Food security: availability, access, utilisation, resilience

2. For what purpose: “where is it good to be a farmer? ”

- a. Monitor change:
 - transformation of the agricultural sector (food system) – 500 million smallholder farmers
- b. Inform policy making
- c. Shape strategy and action

3. Two-pronged process:

- a. Fast track: Benchmarking the Business of Agriculture (BBA), as a sub-component of
- b. Comprehensive: “Agricultural Transformation index “ (ATI)



Agricultural Transformation Index :

A conceptual framework



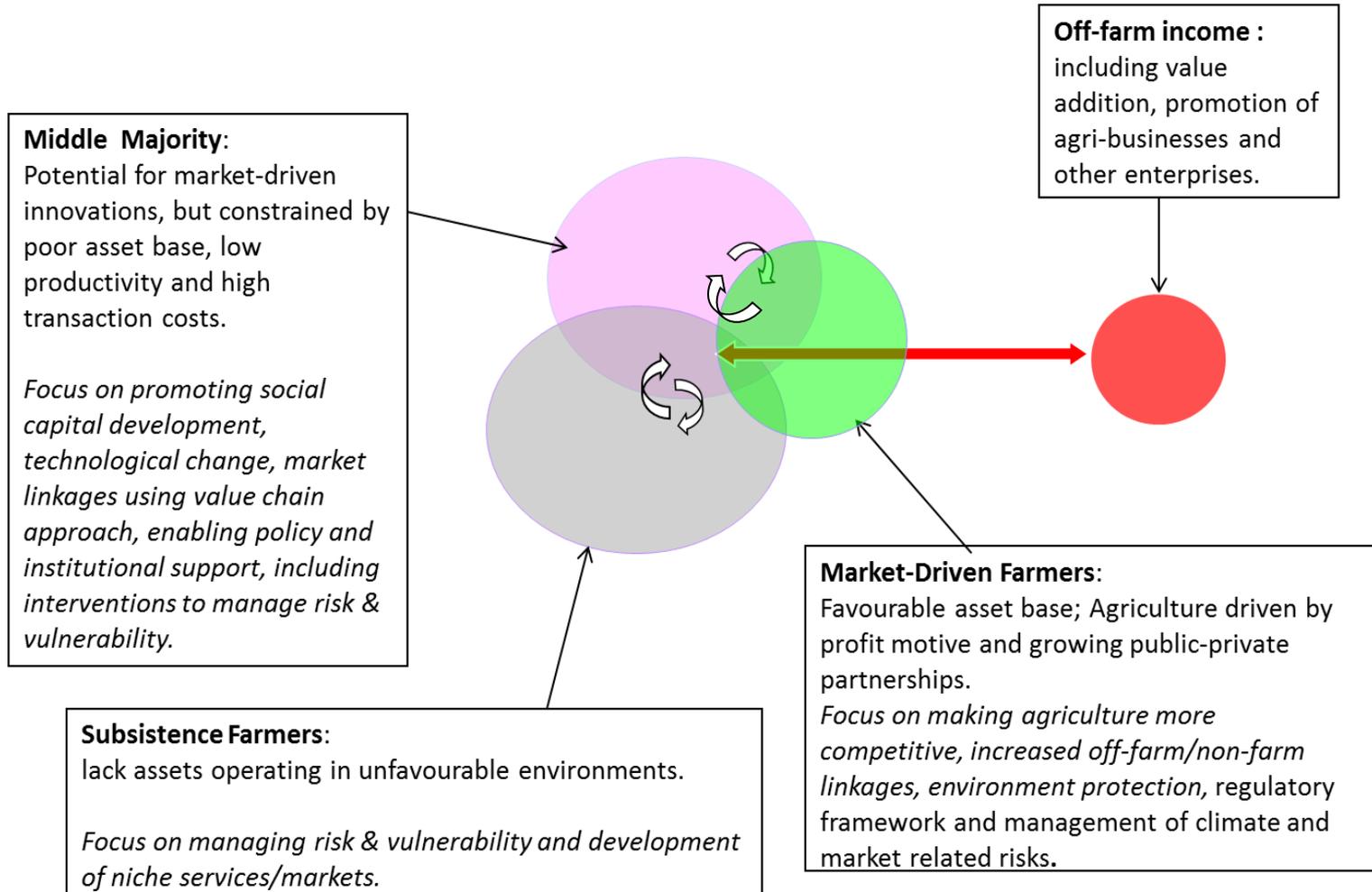
How to collect the data?

There is merit in innovative evidence based approaches:
the **World Agricultural Watch**

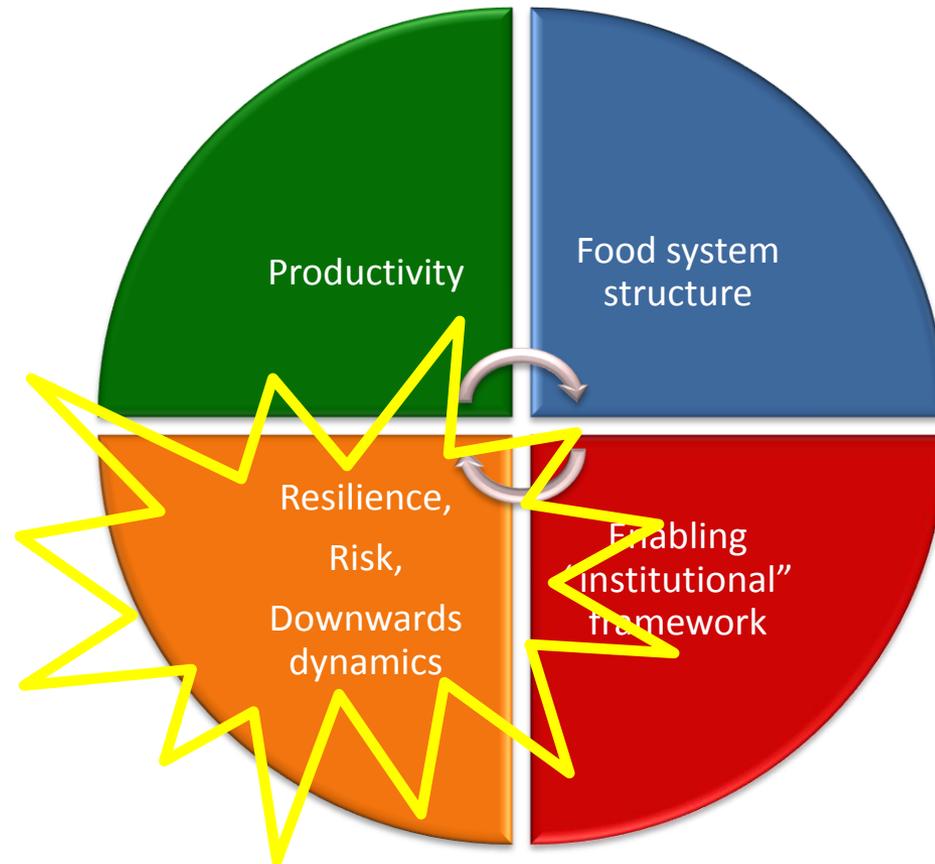
1. **Who:**
 - a. a France/FAO initiative,
 - b. involving governments, FOs, CSOs, think tanks/observatories, research centres around the world (including IFPRI), with
 - c. expanding partnership.
2. **The objective:**
 - a. Develop an agile network of rural observatories (diversity of institutions) across a range of countries (divers country types) with diverse farming systems (diversity of issues), in order to monitor transformations in rural/ag systems.
 - b. Quantitative and qualitative information, analysis, prognosis, policy choices
 - c. In addition to being owned and useful for the specific countries, this would also provide a consolidated evidence-based knowledge base for designing policies, programmes, responses to crises, etc...
3. **The work involves:**
 - a. the development of a methodology, prototypes of observatories,
 - b. tests and
 - c. scaling up (and scaling out, at some stage).
4. **At the centre:**
 - a. the role of smallholder/family farmers, now and in future, with and without crisis...
 - b. National capacity building is central in this, also.
5. **Pilots:**
 - a. Vietnam, Madagascar, Burkina Faso, Nicaragua (and one more NENA country)
 - b. good start-up conditions (government commitment, observatory readiness, crucial ag sector issues, ...).
6. **Related initiatives:**
 - a. The Global Strategy to Improve Agricultural and Rural Statistics
 - b. NEPAD Rural Futures
7. **IFAD's is committed to these initiatives**
 - a. support in kind (staff time) ;
 - b. other resources, in the context of the respective country programmes and/or the grants programme



Theories of change



Agricultural Transformation Index: the risk dimension





**The ATI will guide us and tell us:
who will feed the world in 2050, where, how and at what cost , and
whether we are meeting Sustainable Development Goals**

***Developing the ATI index:
The SRI sub-component***

Alessandra Garbero

ATI

Objective: to guide policies and **monitoring trends** in the (policy) framework conditions

Features

1. It should include **elements** that national policies can influence
2. Indicators about **effects** of these policies should be secondary/supplementary indicators because they don't reflect constraints
3. **Actionable:** it can be influenced (sensitive to changes in these policies)
4. Focus on specific constraints: legislative framework, institutions, public investments, investment climate

Is this an index that should just focus on the red share of the diagram i.e. **enabling “institutional” framework?**



Limitations

1. This is just one aspect i.e. one dimension
2. “Enablers” won’t work in the presence of covariant risk (natural resource constraints for instance) unless they **effectively address** these risks (i.e. insurance mechanisms).
3. Index should include other types of constraints (the non-actionable ones)

Agricultural transformation should be a function of the following dimensions:

1. Institutional/Policy framework → Benchmarking business in Ag.
2. Resilience capacity vis a vis covariant & idiosyncratic risk
3. Productivity → efficacy of 1) and 2) should result in enhanced agricultural productivity
4. Behavioural change that could result in transformation (unmeasured)

ATI= function (1, 2, 3, 4)



IFAD's focus

1. Component 3
2. Scope: Measure resilience capacity vis a vis covariant & idiosyncratic risk
3. Definition of (economic) resilience: function of assets & adaptive capacity (ex-post/ex-ante)
4. Takes into account heterogeneity in smallholders types as well as risk classes



Empirical regularities

1. Smallholders: **Heterogeneous** group

Africa (Jayne *et al.* 2010)

1. Declining land/labor ratios
2. High inequality of landholding distribution within the smallholder sectors
3. High concentration of marketed maize and other crops
4. Most rural households being purchasers of maize rather than sellers
5. Rapid urbanization based on a pushing of labor out of rural areas
6. Changing urban consumption patterns

Latin America & Caribbean (Livingston *et al.* 2011)

1. Inequality of landholding distribution and access to land (0.78) vs (0.62 Africa).
2. Gini coefficient of rural income >0.5 (most unequal sector in the world)

Asia (Ganesh *et. al.*, 2011)

1. Declining farm size over time
2. Inverse relationship between farm size and productivity per hectare
3. Green Revolution
4. Slow urbanization

Middle East – North Africa (Mahieux *et. al.*, 2011)

1. Landowners owning <2 Ha of rain fed or irrigated cultivable land
2. Landless HHs depending on livestock, casual labour
3. Dispersed settlement
4. Seasonal /long-term migration to urban areas



Risk Classes

Risk Classes	Risks
Self-sufficient HHS without access to markets (small prop. 5% Malawi; 8% Nepal)	Loss of access to natural resources and to production shortfalls associated with climate risk
Food producing HHs that are net sellers of food (31% of rural HH, FAO 2008)	Loss of access to natural resources, and variable productivity of their resources (may benefit from price increases)
Food-producing HHs that are net buyers of food (the majority).	Production risks and higher food prices
Rural landless, non-farm rural, poor urban HHs	Higher food prices. Unemployment risk if it is influenced by poor performance of ag sector



Data dimensions of resilience index

Data dimensions	Proxies
Income	Avg. consumption/income by source
Food access	Proxied by food consumption
Agricultural assets	Monetary value of land and animals owned by each household divided by the household size
Non-agricultural assets	Durables
Agricultural technology	use of organic/non-organic fertilizer; ag inputs
Social safety nets & insurance mechanisms (informal vs. formal)	Transfers received by individual, non-profit organizations, government, firms, and remittances. Insurance
Frequency of shocks (idiosyncratic vs covariant)	Price shocks, Rainfall index, Temperature
Adaptive capacity (off-farm activities , educational level)	Number of income sources; educational level of household head.



Conclusion

1. Data “hungry”
2. Availability of information on small scale agriculture
→not used
3. Need for systematic database
4. Will provide valuable insights for the formulation of policy options at national/regional/global levels
5. Index construction: various aggregation methods (Latent variable modelling, FA, PCA)
6. Panel surveys needed to capture transformation (dynamics)
7. Adding extra questions to the Deep Dive Surveys to capture relevant information?

